REMARKS

Claims 1-8, 19-26, 37-44 and 55-60 are pending. By this Amendment, claims 1, 5, 6, 19, 23, 24 and 37 are amended, and new claims 55-60 are added. Support for the features recited in new claims 55-60 is found in the specification, at least at page 25, lines 5-13. Reconsideration based on the above amendments and following remarks is respectfully requested.

Applicant appreciates the courtesies shown to Applicant's representative by Examiner Cunningham in the February 12, 2004 personal interview. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

I. The Claims Define Patentable Subject Matter

The Office Action rejects claims 1, 2, 19, 20, 37 and 38 under 35 U.S.C. §102(b) over (U.S. Patent No. 4,935,879 to Ueda (hereinafter "Ueda"); rejects claims 3, 21 and 39 under 35 U.S.C. §103(a) over Ueda in view of U.S. Patent No. 6,611,264 to Regan (hereinafter "Regan"); rejects claims 4, 5, 22, 23, 40 and 41 under 35 U.S.C. §103(a) over Ueda in view of U.S. Patent No. 6,597,363 to Duluk et al. (hereinafter "Duluk"); and rejects claims 6, 7, 24, 25, 42 and 43 under 35 U.S.C. §103(a) over Ueda in view of U.S. Patent No. 6,236,405 to Schilling et al. (hereinafter "Schilling"). The rejections are respectfully traversed.

As asserted by Applicant's representative, and agreed to by Examiner Cunningham, at the February 12 personal interview, Ueda, Regan, Duluk and Schilling, individually or in combination, fail to disclose or suggest "an index number setting section which sets image information of an original image as an index number in a lookup table for index color texture-mapping; and a drawing section which transforms the image information of the original image by performing index color texture-mapping on a virtual object by using the lookup table in which the image information of the original image is set as the index number", as recited in independent claim 1, and similarly recited in independent claims 19 and 37.

Ueda, in Fig. 8 and at least at col. 5, lines 43-52 and col. 6, lines 4-7, discloses dual memories 4 storing the color information rather than an index number. Further, in Ueda, the color look-up table memory 10 in Fig. 8 presents both the texture space and the lookup table space as shown at respective A1 and A2 in Fig. 3 of Applicant's disclosure.

In Ueda, as disclosed in Fig. 8 and associated disclosure, color data is outputted from the color look-up table memory 10 based on the texture coordinates uj, vj from the dual port memory 2. In Ueda, the position of a texel is specified in the texture space based on the texture coordinates uj, vj from the dual port memory 2. Subsequently, in Ueda, the look-up table (LUT) 10 is referred to based on the index number stored in the specified texel to output color data from the color look-up table 10.

At the February 12 , 2004 personal interview, Examiner Cunningham asserted that the indexing of the LUT of the present application may correspond to Ueda's texture plane coordinate data uj, vj with indexing implied. Applicant respectfully disagrees.

In Ueda, as discussed above with reference to Fig. 8, the texture coordinates uj, vj and color look-up table 10 disclose a conventional index color texture mapping.

In contrast, in the invention set forth in independent claims 1, 19 and 37, the image information of an original image, such as, for example, the color information of an original image drawn in a frame buffer, is first set as an index number in a lookup table. (See specification, at least at page 30, line 27 to page 31, line 5, and in Fig. 4, B1) The lookup table in which the image information of the original image is set as an index number is then used to perform the index color texture mapping relative to a virtual object, such as, for example, a polygon having a size equal to that of a display screen, for transforming the image information of the original image. (See specification, at least at page 31, lines 5-11, and in Fig. 4, B2)

The system and method set forth in claims 1, 19 and 37 may be used to obtain a gamma corrected image (such as the image shown in Fig. 5B) from an original image (shown in Fig. 5A) with increased speed and relatively small processing load.

Regan does not make up for the above-noted deficiencies of Ueda. Regan discloses at col. 1, lines 40-51 that 3-D objects with complex curve surfaces can be represented by triangles.

Duluk does not make up for the above-noted deficiencies of Ueda and Regan. Duluk discloses at col. 113, lines 46-51 that a RAM may be used to perform lookup based gamma correction.

Schilling does not make up for the above noted deficiencies of Ueda, Regan and Duluk. Schilling discloses at col. 10, line 61-col. 11, line 17 a color lookup table where for each pixel, eight indices are read out of the memory and passed to an onchip color lookup table (CLUT). The CLUT has 256 entries for R, G, B and opacity α and acts as an eight-port memory.

Accordingly, independent claims 1, 19 and 37 define patentable subject matter. Claims 2-8, 20-26 and 38-44 depend from the respective independent claims, and therefore define patentable subject matter. Accordingly, withdrawal of the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) is respectfully requested.

New claims 55-60 recite additional features of the invention. Applicant submits that new claims 55-60 are patentable over the applied art for at least the reasons discussed above.

II. Conclusion

In view of the foregoing, this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-8, 19-26, 37-44 and 55-60 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

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